

*Proposition 1B: Goods Movement Emissions Reduction Program*

*Local Agency Project Application*

***Application #3 for the Los Angeles / Inland Empire Trade Corridor  
Source Category: Cargo Handling Equipment and Ships at Berth***

*August 6, 2015*

*Submitted by:*

*(Existing Local Agency)  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, California 91765*

*Submitted to:  
Goods Movement Emission Reduction Program  
Stationary Source Division  
California Air Resources Board*

*Standard U.S. Mail: P.O. Box 2815, Sacramento, CA 95812*  
*Other Delivery Services: 1001 I Street, Sacramento, CA 95814*

*Electronic Copy Emailed to: [gmbond@arb.ca.gov](mailto:gmbond@arb.ca.gov)*

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# 1. General Information

The South Coast Air Quality Management District (SCAQMD) has been a world leader in administering and implementing incentive programs to reduce mobile source air pollution, across a wide array of vehicle and equipment types that include heavy-duty trucks, marine vessels (including ships at berth), locomotives, construction equipment, forklifts, transit buses, and school buses. Since 2008, SCAQMD has been implementing the Proposition 1B – Goods Movement Emission Reduction Program (Proposition 1B Program) in the South Coast Air Basin (SCAB).

Below is a summary of SCAQMD's experience with the Proposition 1B Program:

**Table 1: SCAQMD's Proposition 1B Projects in Year 1 (FY2007-08)**

Project Category	Number of Projects	Total Funds Obligated	Emission Reductions	
			PM (lbs)	NOx (lbs)
Heavy-Duty Trucks	2,483	121,828,000	1,245,580	26,790,265
Locomotive	4	3,000,000	27,547	1,180,098

**Table 2: SCAQMD's Proposition 1B Projects in Year 2 (FY2008-09)**

Project Category	Number of Projects	Total Funds Obligated	Emission Reductions	
			PM (lbs)	NOx (lbs)
Heavy-Duty Trucks	1,896	83,411,700	513,966	14,022,677
Truck Stop/Distribution Center Electrification	1	90,000	7,090	206,822
Locomotive	6	4,500,000	29,010	314,784
Ship at Berth	25	56,933,870	372,777	21,840,746

**Table 3: SCAQMD's Proposition 1B Project in Year 3 (FY2011-12)**

Project Category	Number of Projects	Total Funds Obligated	Emission Reductions	
			PM (lbs)	NOx (lbs)
Heavy-Duty Trucks	104	3,115,000	1,093	973,253

**Table 4: SCAQMD's Proposition 1B Project in Year 4 (FY2012-13)<sup>1</sup>**

Project Category	Number of Projects	Total Funds Obligated	Emission Reductions	
			PM (lbs)	NOx (lbs)
Heavy-Duty Trucks	2,193	90,903,250	112,495	9,929,011

<sup>1</sup> Payments in process for the "Year 4" projects. All equipment must be in operation by 12/31/2015 with funds liquidated by 3/31/2016.

SCAQMD has executed hundreds of contracts with equipment owners amounting to over \$385 million in program funding. SCAQMD has funded the retrofit and replacement of thousands of older, high-polluting, heavy-duty diesel trucks involved in freight transport activities resulting in significant air quality and public health benefits to the region. SCAQMD has also served as the lead agency in administering the Program for projects in other source categories, including locomotives and ships at berth, for the LA/Inland Empire trade corridor. For these projects, the new trucks will be in place for at least five years while the ships at berth, locomotive and truck stop electrification infrastructure projects will be in place for at least 10 years, providing long-term emission reductions in the region.

## **2. Project Proposal**

### **a. Trade Corridor Targeted, Air Quality Problems, and Key Contributing Pollutants**

SCAQMD's proposal will reduce emissions from freight transport activities related to cargo handling equipment and ships at berth in the Los Angeles/Inland Empire trade corridor. This region is the gateway for the nation's goods movement traffic with Asia, and its residents are disproportionately impacted by the diesel air pollution resulting from these freight movement activities. The trade corridor includes the two largest ports in the western United States, the Port of Los Angeles (POLA) and Port of Long Beach (POLB), as well as the Port of Hueneme (POH). More than 40% of the nation's seaborne container trade moves through POLA and POLB, which together form the single largest fixed source of air pollution in the SCAB. The mobile emission sources operating in and around the ports, including ocean-going vessels, freight locomotives, commercial harbor craft, cargo handling equipment, and heavy duty diesel trucks, are collectively responsible for the majority of smog and particulate-forming nitrogen oxide emissions in the region. Furthermore, the California Air Resources Board (ARB) estimates that port-related particulate matter emissions are a leading airborne cancer risk to residents of the region.

The eastern half of this region supports the massive warehousing and distribution centers needed to manage and organize the freight flowing from the ports to destinations throughout the country. The trucks, locomotives, railyard, and distribution center equipment managing these goods movement activities are significant emission sources in the Inland Empire. Furthermore, the general onshore flow of air sends much of the SCAB regions' pollution eastward, where it is trapped by the San Gabriel and San Bernardino mountains and exposed to abundant sunlight which triggers photochemical reactions that produce ozone and the majority of particulate matter. In SCAQMD's annual historical air quality data, portions of the Inland Empire experience the worst air quality in the region and the nation for both ozone and PM10.

Diesel cargo handling equipment and ships at berth represent significant sources of diesel particulate matter (PM) emissions. Diesel PM has been identified as a toxic air contaminant based on its potential to cause cancer, premature death, and other health problems. The MATES IV report (SCAQMD Multiple Air Toxics Exposure Study, 2015) found that the highest concentration of diesel PM occurs around the Ports of Los Angeles and Long Beach. Although the region has made great strides in reducing diesel PM compared with previous MATES studies, PM continues to dominate the overall cancer risk from air toxics, and residents surrounding the Ports of Los Angeles and Long Beach continue to experience the highest risks, followed by a Los Angeles rail yard location.

The SCAB is disproportionately exposed to air pollution as compared to the rest of the nation, with major portions of that burden imposed by managing the nation's freight transport activities. Based on ARB's 2013 Almanac, the SCAB receives exposure to PM<sub>2.5</sub> concentrations well above federal health standards. Currently, about 42% of all diesel-related NO<sub>x</sub> emissions in the SCAB are from goods movement related source categories, according to SCAQMD's Preliminary Draft 2016 AQMP White Paper on Goods Movement. Thus, this trade corridor needs major reductions in goods-movement-related emissions to significantly reduce unhealthful emissions.

b. Identification of Funding Category

This application is specific to the two source categories "Cargo Handling Equipment (CHE)" and "Ships at Berth." The CHE source category will include: rubber-tired gantry (RTG) cranes conversion/replacement, yard trucks conversion/replacement, and replacement of forklifts and lifts operating at a seaport, intermodal rail yard or other freight facility. Projects in the CHE category will involve the replacement or conversion to zero-emission technology (electric or fuel cell), as allowed by the Guidelines.

The "Ships at Berth" source category is limited to berths/vessels that are not subject to ARB's Ships at Berth Rule. Projects in this category will involve the installation of grid-based shore power systems for ships at berth as allowed by the Guidelines. For non-grid based systems, only zero emission units or natural gas engines equipped with selective catalytic reduction (SCR) technology to control NO<sub>x</sub> emissions are eligible. The "Ships at Berth" category also includes ship emissions capture and control systems, such as the hood or bonnet system, that will reduce PM and NO<sub>x</sub> emissions by at least 80%. The ship emissions capture and control system must be approved by ARB.

Further descriptions of our proposed projects within these source categories are provided in the subsections that follow. Cost details of our proposed projects are provided in the Funding Demonstration section.

c. Air Quality Problems and Key Contributing Pollutants in the Trade Corridor

(Please see our detailed description in Section 2a above.)

d. Consistency with Local and Regional Plans

The proposed Proposition 1B funded program is consistent with several inter-related plans in the South Coast region to reduce emissions from freight transport activities. A common denominator for all these plans is the pressing need to greatly accelerate equipment turnover and support the development of electrification infrastructure to more rapidly realize the benefits from deploying advanced zero and near-zero emission technologies. The availability of Proposition 1B funds is critical to expedite this process. Our application to fund CHE projects (via the replacement or conversion to zero-emission technologies and supporting charging infrastructure) and Ships at Berth projects (including the installation of zero-emission shore power or ship emissions capture and control systems) is consistent with the local and regional plans described below.

These inter-related local and regional plans include the following:

SCAQMD's 2012 Air Quality Management Plan (AQMP) –

The 2012 AQMP identifies at least two control strategies targeting emission reductions from cargo handling equipment and ships at berth. Control measure ADV-03 looks at the deployment of zero and near-zero emission technologies for cargo handling equipment while control measure OFFRD-04 seeks to have an additional 25 percent of vessel calls beyond the statewide regulation to deploy zero-emission shore power technologies or alternative forms of emissions reduction as early as possible. This control measure specifically mentions that such actions could be implemented through additional incentive programs.

The 2012 AQMP recognizes shore power as an important new State Implementation Plan measure to reduce emissions from goods movement related activities. For SCAQMD and ARB to fulfill their commitment in achieving the federal air quality standards for PM<sub>2.5</sub> and ozone, we must greatly accelerate the pace of transition to a zero and near-zero emissions goods movement system. The fundamental basis for proposing these CHE and ships-at-berth projects is to achieve expedited NO<sub>x</sub> and PM emission reductions at the ports, rail yards, and distribution facilities within the SCAB's heavily impacted goods movement corridors. This proposal is fully consistent with, and an integral part of, the 2012 AQMP to obtain necessary emission reductions from goods movement operations in the region.

SCAQMD's 2016 Air Quality Management Plan (AQMP) White Paper for Goods Movement (Preliminary Draft)

The 2016 AQMP Preliminary Draft Goods Movement White Paper was prepared to identify areas of focus for the development of the 2016 AQMP. This document describes the PM and NO<sub>x</sub> emissions impacts from CHE and ships at berth in the SCAB. The document states that the most effective set of regional emission reduction strategies will consist of a combination of advanced technology deployment, incentives programs to accelerate the replacement of older trucks and off-road equipment, infrastructure enhancements, and funding incentives to expedite the commercialization of near-zero and zero-emission technologies as early as possible. There is a need to offer funding assistance to owners/operators that are willing to purchase a near-zero or zero-emission vehicle or equipment to help offset the higher cost. This round of Prop 1B funding will be available to owners/operators for purchase of zero-emission cargo handling equipment technologies as they become available, and to support reductions from ships' auxiliary engines while they are anchored or docked at ports in the SCAB.

ARB's 2015 Sustainable Freight: Pathways to Zero and Near-Zero Emissions Discussion Document – This document was prepared by the ARB as an initial effort to develop a comprehensive, integrated sustainable freight plan, in partnership with other State and local agencies. The ARB considers the development of this plan a high priority to address localized health impacts, attainment of air quality standards, and achieving climate goals. The final document will identify both regulatory and voluntary levers to accomplish a near-zero or zero emission freight system, taking into consideration the current and anticipated state of commercialization of various technologies that can achieve very large reductions in criteria pollutant and GHG emissions.

For CHE, the discussion document recognizes the current use of battery electric, fuel cell, and grid electric technologies for some equipment operations. ARB explains these CHE technologies could be a focus of funding support since they are further along in the development and demonstration phase. One of ARB's goals is to enable zero-emission operations for larger bulk handling applications since this technology is expected to become technically feasible in the future. ARB recommends support for the accelerated introduction of zero and near-zero emission technologies into the marketplace. This proposal will provide funding support for such technologies and accelerate the commercialization while reducing emissions from cargo handling equipment.

For Ships at Berth, the Sustainable Freight plan recognizes the need to accelerate deployment and expand the number of near-zero and zero-emission technologies for ships at berth, building upon progress with the ARB's At-Berth Regulation. The At-Berth Regulation that became effective in 2014, reduces PM and NO<sub>x</sub> emissions as well as GHGs through the

use of grid-based electrical power and encourages greater use of at-berth technologies (more plug-ins, fuel cells, and emissions capture and control systems). The Sustainable Freight Plan supports ARB incentives and proposed amendments to the At-Berth Regulation that would expand and include other vessel types to achieve additional emission reductions. SCAQMD's implementation of its Ships at Berth Proposition 1B proposal will help support critical state emission reduction goals from the vessel population.

The San Pedro Bay Ports Clean Air Action Plan (CAAP) – Originally initiated in 2007, Control measure CHE-1 of the San Pedro Bay Ports CAAP focuses on reducing emissions from cargo handling equipment serving POLA and POLB terminals. The goal of this control measure is to accelerate implementation of ARB's requirements through new and revised tenant leases. After 2014, the current phase of the emission reduction measure schedule is for all cargo handling equipment with engines greater than 750 hp shall meet a minimum of the EPA Tier IV off-road engine standard. All pre-Tier IV diesel engines are to be replaced by Tier IV engines or LNG engines.

Control measure OGV-2 of the San Pedro Bay Ports CAAP focuses on reducing ships at berth emissions at the POLA and POLB terminals. The goal of this control measure is to achieve emission reductions from ships at berth through the use of shore power or other emission reduction technologies at all container terminals within five to ten years. This proposal requests funding support for grid-based shore power, non-grid based shore power (zero or natural gas engines with SCR), or emissions capture and control systems to reduce emissions from ships at berth, which is consistent with the goals of the CAAP.

Draft-Port of Los Angeles Zero Emission White Paper – Since Port of Long Beach (POLB) and Los Angeles (POLA) published 2011 Zero Emission Roadmap, both ports have continued to carry out demonstration of zero emission vehicles and equipment with the goal of advancing these technologies. This document stated that to reduce greenhouse gas emissions (GHG) associated with freight movement will require a steady movement toward use of zero emission technologies, including transition of cargo handling equipment to zero emissions, zero emission yard trucks, supporting infrastructure for charging and fueling. Prop 1B CHE and Ship at Berth proposal will support ports to achieve their plan.

e. Other Related Information Requested by ARB Staff

(At this time, SCAQMD has no information for this section.)



### 3. Provisions to Customize Proposal

SCAQMD plans to customize this proposal by incorporating the geographic restrictions noted below. Aside from this, the SCAQMD has no plans to customize any of the other Program options described in Chapter III.C of the guidelines.

**Important note:** This application attempts to best identify all known project factors, including any “alternatives” defined by ARB. However, it is not possible at this time to predict or detail all factors that may affect deployment of projects that will be cost shared with Prop 1B funds.

#### a. Technology Alternatives

The guidelines indicate that local agencies can “customize” a source-category specific proposal by incorporating a variety of technology alternatives. SCAQMD is not proposing to customize any of the technology options specified in Appendix C and E of the most recent 2015 Program Guidelines. SCAQMD proposes to allow funding for any project type or technology option that meets the eligibility requirements of the guidelines.

There are four basic types of equipment included in the cargo handling equipment portion of the funding category: RTG cranes, yard trucks, forklifts, and lifts. For RTG cranes, funding is available to convert or replace existing diesel equipment with zero emission systems, plus infrastructure to supply electric power to the crane. For yard trucks, the technological alternatives are to convert or replace an existing diesel yard truck with an electric-powered (or fuel cell) yard truck. Additionally, funding for a multi-unit battery charger is available for three yard trucks. The program will also provide funding to replace an existing diesel-powered forklift or lift with electric or fuel cell powered equipment.

There are three technological alternatives to control emissions for ships at berth. The first is the use of grid-based power where the installed equipment allows ships to utilize power from the regional utility provider. SCAQMD has successfully implemented several grid-based power projects in previous rounds of Proposition 1B. The second option is non-grid-based power including a zero-emission power source (such as fuel cell, battery electric or solar) or a natural gas engine equipped with SCR technology. The third is the use of a capture and control system approved by ARB, such as the new Maritime Emissions Treatment System (METS-1). This system was approved by ARB in June 2015 as a commercially ready ship emissions capturing system. It is mounted and deployed from a barge that is positioned alongside the ship, and positioned over the vessel’s smoke stack to capture and treat more than 90 percent of particulate (PM) and NOx emissions.

#### b. Project Implementation Approaches and Use of Contractors

SCAQMD will serve as the recipient/local agency and shall retain full responsibility for the program requirements and deadlines specified in the Guidelines and executed grant agreements with ARB. SCAQMD will solicit project proposals from equipment owners located at the ports and intermodal railyards. SCAQMD will evaluate each application for eligibility, and then competitively rank each project proposal in accordance with the Guidelines and Board's approval to determine which equipment projects will be funded. Program funds will not be committed prior to the competitive ranking process.

SCAQMD may utilize contractors to assist in evaluating technologies and proposals. Additionally, any contractors will be screened to ensure there is no conflict of interest. When a contractor is utilized for evaluation process, final determinations of the awardees will be conducted by SCAQMD.

c. Procedure / Process Alternatives

At this time, SCAQMD does not propose any project alternatives involving alternative procedures or processes.

d. Geographic Operations

For CHE, SCAQMD plans to customize its proposal by restricting eligibility to equipment operated at the ports, rail yards and other freight facilities in the LA/Inland Empire trade corridor.

For Ships at Berth, SCAQMD plans to limit project locations to the ports or vessels in the LA/Inland Empire trade corridor.

## 4. Funding Demonstration Elements

This section documents that 1) SCAQMD has the fiscal ability to implement the proposed projects; and 2) all non-Program match funds will be reasonably available within the timeframes of the proposed project schedule.

SCAQMD will be the lead local agency for this application. Below is an overview of SCAQMD's financial structure.

The latest budget adopted by SCAQMD's Governing Board is for FY 2014 – 2015. The FY 2014-15 Budget & Work Program categorizes expenditures into nine work program categories. These categories include: Advance Clean Air Technology; Ensure Compliance with Clean Air Rules; Customer Service and Business Assistance; Develop Programs to Achieve Clean Air; Develop Rules to Achieve Clean Air; Monitoring Air Quality; Timely Review of Permits; and Policy Support. Each activity performed by the SCAQMD falls into one of the above categories. The budget for each program category

ties the goals and objectives of the agency to each of its program activities, identifying resources, performance measures/outputs and legal mandates. A complete description of each work program can be found in the Work Program section of the FY 2014-15 Budget & Work Program. The following table identifies the expenditures by category for FY 2014-15.

**Table 5: SCAQMD's FY2014-15 Budget by Funding Category**

<b>PROGRAM CATEGORIES</b>	<b>FY 2014-15 Budget (\$)</b>
ADVANCE CLEAN AIR TECHNOLOGY	\$ 5,943,279
ENSURE COMPLIANCE WITH CLEAN AIR RULES	40,595,094
CUSTOMER SERVICE AND BUSINESS ASSISTANCE	11,257,410
DEVELOP PROGRAMS TO ACHIEVE CLEAN AIR	9,001,281
DEVELOP RULES TO ACHIEVE CLEAN AIR	6,937,646
MONITORING AIR QUALITY	10,159,755
OPERATIONAL SUPPORT	24,127,044
PERMIT REVIEW	20,331,852
POLICY SUPPORT	3,866,713
<b>TOTAL</b>	<b>\$ 132,220,074</b>

More detailed budget information, including the most recent fiscal audit reports, can be found at: <http://www.aqmd.gov/home/about/finance>

a. Program Funds Requested

As shown in the table below, the total amount of Program funds requested for projects in the CHE and Ships at Berth category is \$10,300,000. This is based on the expected demand for funding in this category and the estimated per unit cost of new equipment:

**Table 6: Program Funds Requested by CHE and Ships at Berth Project Category**

<b>Project Option</b>	<b>No. of Projects<sup>2</sup></b>	<b>Estimated Per Unit Project Cost</b>	<b>Proposition 1B Funding Level</b>	<b>Total Program Funds Requested</b>
Grid-based Shore Power	1	\$5,000,000	Lower of \$500,000 or 50% of eligible costs	TBD
Non-Grid-Based Power	1	TBD	Up to \$200,000 per Megawatt	TBD
Emission Capture and Control System	1	TBD	Lower of 50% of the eligible cost	TBD
RTG (Conversion/Replacement)	1	\$1,000,000	Lower of \$500,000 or 50% of eligible costs	TBD
Yard Truck (Conversion/Replacement)	2	\$100,000 - \$250,000	\$80,000 - \$200,000	TBD

<sup>2</sup> The number of projects assigned to each project option within the funding category may change at the time of ranking approval.

Multi-Unit Battery Charger	1	\$70,000	Lower of 50% of eligible cost or \$35,000	TBD
Forklift Replacement	1	\$90,000 - \$180,000	50% of eligible cost or between \$35,000-\$90,000	TBD
Lift Replacement	1	\$100,000-\$160,000	50% of eligible cost or between \$50,000-\$80,000	TBD
<b>Total</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>\$10,300,000*</b>

\*Includes 3% of administration funds

Pursuant to Chapter IV, Subsection (B)(2) of the Guidelines, SCAQMD is required to liquidate funds to equipment owners within 18 months of contract execution for CHE projects if the technology is commercially available or within 3 years if the technology is not commercially available. For Ships at Berth projects, the SCAQMD will assure liquidation within 2 years for non-grid based shore power and ship emission capture and control projects, and 4 years for grid-based shore power projects. Payment will be made once certification/verification is documented and SCAQMD verifies the project meets program requirements. The extended expenditure period will not exceed the statutory liquidation deadline. More detailed information regarding scheduling can be found in Section 7, below.

As the lead applicant and local agency, SCAQMD seeks 3% of the total project funds requested for administration fees, per allowances in the Guidelines. SCAQMD shall follow all Guidelines regarding the use of administration funds, as specified by ARB in Chapter II, Subsection (F)(2)(a).

Pursuant to the Guidelines, SCAQMD is capping its request for administration funds at 3%. SCAQMD will use the administration funds for tasks associated with Program outreach/marketing, implementation, project monitoring and audit and oversight, including: staff time; consultant fees; printing, mailing, and travel costs; project monitoring and compliance expenses; and indirect costs, such as general administrative services, office space, and telephone services.

**NOTE:** SCAQMD acknowledges that there may be insufficient funds in the statewide system to cover all projects requested under this application. We further acknowledge that ARB staff may pro-rate our application at a lower level of funding and proportionally lower the number of projects that can be funded. Upon notification from ARB about the amount of available funding for this source category, we will prioritize awards using the competitive ranking process identified by ARB in the Program Guidelines.

b. Match Funding Requirements

It is anticipated that all matching funds under this particular application will be provided by the private parties that are purchasing the new equipment and, if co-

funding is involved, through other grant funds. SCAQMD is not currently planning to apply additional incentive or matching funds to these Prop 1B projects.

## 5. Air Quality Benefits

As noted, SCAQMD is proposing the repower or replacement of eligible cargo handling equipment with zero emission options, and with the implementation of shore power or ship emissions capture and control systems for ships at berth. For purposes of estimating the air quality benefits, it is assumed only three type of projects, grid-based shore power, RTG crane repower and replacement and yard truck replacement Per the Guidelines, SCAQMD has used the Goods Movement Online Database provided by ARB to quantify the emission reductions and cost-effectiveness of projects proposed in this application. Emission reductions were quantified with the Goods Movement Online Database based on the above listed 3 project categories.

Table 7 provides a summary from the Project Benefits Calculator (from GMOD) showing the overall emissions benefits and cost effectiveness for the types of projects proposed under this application.

**Table 7: Estimated Emissions Benefits and Cost Effectiveness<sup>3</sup>**

Estimated PM Reductions	13,400 lbs
Estimated NOx Reductions	1,223,270 lbs
Sum of Weighted Emission Reductions	1,491,270 lbs
Total Program Bond Funding Request	10,300,000
Benefits per State Dollar Invested	0.14 lbs/\$

## 6. Staff Resources

SCAQMD has sufficient staff resources to successfully implement this local agency project proposal. This section affirmatively demonstrates that SCAQMD has the necessary resources in place to meet the demands of the project type and scope.

Over the last decade SCAQMD has demonstrated the capability and expertise to successfully plan, implement and administer the Proposition 1B and other similar incentive-based programs. ARB staff members are very familiar with our collective accomplishments in these areas, an overview of which we have provided below.

NOTE: At ARB's request, we can provide documentation statistics regarding the relationship between the number of pieces of equipment that can be replaced or upgraded in a given timeframe, and the number of program staff needed to accomplish those projects.

### a. Overview of Prior Incentive Program Experience for the Proposed Team

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<sup>3</sup> Estimated emissions benefits are as calculated by ARB's GMOD.

SCAQMD has successfully been administering incentive programs to reduce emissions from diesel source categories for more than a decade. This resume of experience includes a wide array of replacement, repower and retrofit efforts across multiple programs, including those that specifically on-road and off-road diesel engine applications. SCAQMD has established a very strong track record administering Proposition 1B Goods Movement Emission Reduction programs in the LA / Inland Empire Trade Corridor, culminating with deployment of thousands of lower-emitting heavy-duty vehicles and equipment. In the first 4 years of the Program, SCAQMD executed contracts for over 6,600 heavy-duty diesel truck projects.

SCAQMD has served as a successful partner with ARB and other participating entities by acting as the lead agency for soliciting, evaluating, contracting, and deploying thousands of equipment projects under the Proposition 1B Program. Over the last several years, SCAQMD staff has experience working with ARB on a range of issues related to Proposition 1B funding for heavy-duty diesel trucks, truck electrification infrastructure, shore power, and locomotive projects.

b. Total Staff Positions and Resources

Details about currently available resources from SCAQMD are provided below. As SCAQMD is already implementing major incentive efforts, it is not currently anticipated that additional staff or new consultant resources will need to be added.

**Table 8: Summary SCAQMD Staff / Consultant Resources for Project Implementation**

<b>Staff Classification / Job Description</b>	<b># Currently Available for Proposed Project Source Category<sup>4</sup></b>
Program Staff (Marketing, Outreach, Grants, Contracts, Inspections, Audits, etc.)	8
Managerial / Supervisory Staff (all source categories)	7
Administrative Support Staff (all source categories)	3
Fiscal / Accounting (all source categories)	2
Contractors / Consultants (individuals from multiple sources)	10
<b>Grand Total</b>	<b>30</b>

<sup>4</sup> These numbers are best estimates at the time of the application.

## 7. Project Schedule

A detailed project schedule is provided in Table 9 below, which lists the anticipated date to accomplish each of the milestones identified in the Guidelines. This incorporates our obligation and liquidation deadlines as identified in Chapter IV, Subsection (B) of the Guidelines.

**Table 9: Project Schedule: Anticipated Dates of Events and Milestones**

<b>Project Event / Milestone</b>	<b>Date</b>
(1) Date of community meeting / participation event (see Chapter III.D)	July 22, 2015
(2) Equipment project solicitation period, including marketing/outreach	First quarter 2016
(3) Equipment project application review period	2nd quarter 2016
(4) Competitive ranking of equipment projects and web posting	July 2016
(5) Selection of equipment projects from the competitively ranked list	July 2016
(6) Anticipated date of next grant disbursement request to ARB and amount	TBD
(7) Equipment owner notification period	July 2016
(8) Equipment pre-inspection period (as applicable)	Fourth quarter 2016
(9) Local agency obligation deadline (all contracts must be signed)	Within 2 years after the date of an executed grant agreement with ARB
(10) Equipment post-inspection period	Prior to final payment of the Program funds
(11) Local agency liquidation deadline (all equipment funds must be liquidated)	Within 18 months after contract execution for commercially available CHE, 2 years for non-grid based shore power and ship emissions capture and control systems, 3 years for CHE not commercially available, and 4 years for grid-based shore power
(12) Anticipated submittal of local agency project completion report	TBD

## 8. Certification to Comply with Program Requirements

SCAQMD certifies that it has the ability and intent to fully and effectively satisfy each of the proposed requirements for local agency project implementation. Below is a detailed summary of how SCAQMD will structure this program to meet each requirement listed in the 2015 Guidelines.

### a. Support Community and Public Participation

SCAQMD's Year 5 CHE and ships at berth category outreach will build on our previous, extensive outreach with ports, marine terminal operators, and rail yard operators. We have built these long-term relationships through current incentive efforts, such as the Carl Moyer Program, and due to previous incentive

programs, such as the Proposition 1B (Years 1-4), Carl Moyer, and collaboration with the San Pedro Bay Ports' Clean Air Action Plan initiatives.

In general, SCAQMD utilizes an extensive internal community relations system to generate community participation in various incentive programs. To augment our extensive internal capabilities from our Public Affairs Department and our Technology Advancement Office, SCAQMD utilizes a team of proven and highly skilled third-party consultants. For more than a decade, SCAQMD has regularly prepared and released solicitations targeted to fleets and equipment operators under the Carl Moyer Program and, more recently, the Prop 1B Program. We are skilled at ensuring fully open solicitations as required under the Guidelines and intend to use similar mail, press, online, phone, and in-person resources and approaches to conduct outreach for the proposed Year 5 Proposition 1B program.

In addition, our consultants have experience with the Gateway Cities Fleet Modernization Program, as well as the landmark POLA / POLB Clean Trucks Program, which included cost sharing through Proposition 1B. At least one consultant also implemented the Faster Freight – Cleaner Air and High Horsepower conference series, and have provided direct outreach about grant programs to freight transport operators throughout the nation.

SCAQMD has already taken the first step in its outreach program under this round of the proposed Proposition 1B program: on July 22, 2015, SCAQMD held a local agency pre-application community meeting at the SCAQMD main office in Diamond Bar, California. In order to advertise this meeting, SCAQMD posted a notice on SCAQMD's Proposition 1B Program webpage and emailed the notice to truck dealers and manufacturers, TRU dealers and manufacturers, representatives at the ports as well as locomotive authorities. A copy of the SCAQMD pre-application meeting notice is attached (see Attachment 1). The purpose of this meeting was to solicit public comments on potential funding categories for the current application to ARB under the Year 5 Proposition 1B program. It was well-attended by 21 qualified stakeholders, including dealers, truck owner/operators, Port consultants and technology providers (see Attachment 2). Comments during the meeting indicated that the attendees are highly interested in program participation, and that their primary concerns surround eligibility and the operational applicability of the advanced truck technologies eligible under this program. SCAQMD's marketing plan for the Year 5 Program will ensure that potential applicants are aware of eligibility requirements, technology options, and the timeline flexibility surrounding advanced technology project options.

b. Conduct Marketing and Solicit Equipment Project Applications



SCAQMD has already identified and built relationships with the three major seaports and approximately thirteen railyards that may be interested in projects to reduce emissions from CHE and ships at berth. In close cooperation with SCAQMD, the ports and railyards are expected to separately conduct marketing efforts to further solicit project applications from their respective locations and end user tenants. Upon award of grant funding from ARB, SCAQMD will implement marketing strategies that target the owners of Program-eligible equipment, including but not limited to: coordination with the three Ports and notifying their list of tenants of the funding opportunity, direct outreach to railyard operators, holding public workshops, notifying all dealerships that are currently participating in SCAQMD incentive programs, posting announcements on SCAQMD's webpage, and other strategies that have worked well to implement the early years of the program. SCAQMD anticipates releasing the solicitation for projects in the first quarter of 2016, distributing clear application submittal forms and guidance using the mechanisms identified above, and providing translation support as-needed.

c. Review and Competitively Rank Project Applications (Including Web Posting)

This function will be handled by SCAQMD's internal incentive programs staff in consultation with the participating entities, with assistance as needed from our consultants. Collectively, we have reviewed, ranked and selected thousands of projects across a wide array of source categories, including those involving diesel vehicles, equipment, and port related applications. All procedures and guidelines for the Program will be rigorously followed.

d. Select Equipment Project for Funding, Including Local Approval Process

Equipment and infrastructure projects will be selected based on all Guidelines and requirements, after all applications are thoroughly reviewed by SCAQMD and the participating entities. SCAQMD will prioritize awards using the competitive ranking process identified by ARB in the Program Guidelines.

e. Conduct Equipment Project Pre-Inspections and Compliance Checks

SCAQMD staff will arrange and conduct equipment pre-inspections, similar to how we conduct inspections under the current Proposition 1B Program. SCAQMD staff will also work closely with ARB to complete the required compliance check process. All staff to be involved have prior experience through Proposition 1B and other incentive programs. Further, all procedures and guidelines for the Program will be rigorously followed.

f. Notify Equipment Owners of their Application Status

SCAQMD will utilize similar existing procedures currently under the Proposition 1B Program to ensure that equipment owners are notified in a timely and effective manner about all requirements, deadlines, reporting obligations, etc.

g. Execute Equipment Project Contracts

Drawing on past similar experience with Proposition 1B-funded projects, SCAQMD will use existing policies and procedures to ensure that equipment project contracts are executed as expeditiously as possible in accordance with all Guidelines.

h. Ensure Equipment Project Scrappage

For more than a decade under various air quality programs, SCAQMD has been working with licensed dismantler facilities throughout the SCAB to scrap replaced light- and heavy-duty vehicles and diesel equipment. For example, under the Carl Moyer Voucher Incentive Program (VIP) and the current Proposition 1B Program, we follow all applicable guidelines for vehicle scrappage using list of SCAQMD approved licensed facilities. SCAQMD staff has extensive experience reviewing inspection reports, photographs and other documentation to verify each truck was destroyed in accordance with the program requirements. SCAQMD will utilize these existing procedures and relationships with dismantling facilities to set up an efficient, effective scrappage system under our proposed Proposition 1B Program.

i. Conduct Post-Inspections of New or Upgraded Equipment

This process will be part of the ongoing activities of SCAQMD staff assigned to conduct inspections under the Proposition 1B Program. SCAQMD has dedicated inspectors that are trained and well-experienced in conducting the post-inspections for the Proposition 1B Program. As part of the Year 2 funding program, SCAQMD inspectors completed the pre- and post-inspections for a total of 25 grid-based shore power systems at the 3 ports located in the LA/Inland Empire trade corridor. All procedures and guidelines for the Program will be rigorously followed.

j. Request Disbursements from ARB

SCAQMD has extensive experience working with ARB to request funds under the Proposition 1B Program, Carl Moyer Program, and other incentive programs. Our team will work closely with ARB staff to ensure that requests for Proposition 1B funds are provided in a timely manner that complies with all ARB's needs and requirements.

k. Process Invoices and Requests from Equipment Owners for Payment (Including Direct Payments to Vendors)

SCAQMD has extensive experience in this area through more than a decade of running the Carl Moyer Program and more recently the Proposition 1B Program. For example, the SCAQMD processed thousands of invoices for heavy-duty diesel truck projects funded by the Proposition 1B Program, which consisted primarily of direct payments to vendors through established mechanisms to pay invoices after the transaction is fully executed, or we can issue two-party checks in the name of each grantee and his/her selected dealership selling the replacement truck. Within the guidelines and constraints set up by ARB, we will continue to build on this prior experience to successfully administer new rounds of Proposition 1B funds.

I. Calculate and Report Earned Interest

SCAQMD's Treasurer, the Los Angeles County Auditor/Controller, calculates interest based on average daily cash balances. SCAQMD tracks the interest earned for specific grant programs based on the monthly interest statements we receive from Los Angeles County. Calculation and reporting of Proposition 1B Funding interest earned will be consistent with how interest is calculated for other restricted grant programs. If any special requirements or procedures exist, SCAQMD will work with the appropriate State officials to incorporate them.

m. Evaluate Equipment Projects / Assess On-Going Compliance with Contract Conditions

SCAQMD and our consultants have extensive experience in evaluating equipment project applications. SCAQMD has received thousands of applications through past solicitations which have provided SCAQMD and our consultants with a significant level of experience in evaluating projects and determining eligibility for program funding. Based on our extensive experience in project evaluations, SCAQMD informed ARB of recommendations for streamlining and many of these recommendations were approved by ARB in the latest update to the guidelines.

SCAQMD has executed hundreds of contracts with equipment owners under the Proposition 1B Program and is experienced in dealing with "non-performance" issues. Our staff members are very adept at working with grant recipients to solve problems while ensuring that emissions reductions from individual projects are maximized. In extreme cases involving non-performance when problems cannot be solved by working directly with grant recipients, SCAQMD will not hesitate to initiate legal action and / or seek reimbursement of funds. SCAQMD aims to find a proper balance between protecting program assets, ensuring air quality benefits, and resolving participant problems, all within the confines of the Proposition 1B Program.

n. Provide Required Reports to ARB

SCAQMD has extensive experience providing reports to ARB and other agencies about heavy-duty vehicle and equipment incentive programs. SCAQMD will utilize existing reporting procedures and methods as the basis to meet the specific reporting requirements of the Proposition 1B program.

o. Participate in Program and Fiscal Audits and Evaluations

SCAQMD staff members are fully prepared to participate in Prop 1B program and fiscal audits as evidenced by ARB's most recent audit of SCAQMD in August 2010, which included a review of the Prop 1B Program. ARB audited SCAQMD's Proposition 1B, Carl Moyer, and Lower-Emission School Bus Programs for Fiscal Years 2005-06 through 2008-09.

The 2010 audit was very comprehensive and included both financial and project implementation aspects of SCAQMD's programs. Several facilities were visited and many vehicles were inspected. As noted in ARB's report the SCAQMD's programs are the largest in the State, implementing over \$416 million in State grants and District-provided matching funds through the replacement and/or retrofit of over 9,000 vehicles and equipment during the subject period, including:

- Over 390 new natural gas school buses;
- 1,000 retrofits of school bus engines;
- Over 2,600 on- and off-road engine and vehicle replacements under the Carl Moyer Program; and
- Over 2,700 truck replacements and 60 engine retrofits under the Proposition 1B-Goods Movement Program.

Due to the SCAMD's robust efforts in implementing these projects, the District's incentive programs have achieved early and surplus reductions of ozone precursors and toxic emissions, as confirmed by ARB in its review report.

ARB also recognized SCAQMD's highly successful implementation of its Proposition 1B-Goods Movement Program "Early Grant" projects, and SCAQMD appreciates ARB's determination that SCAQMDS's efforts have been "commendable," defined as "an exceptional practice that goes beyond the basic requirements for implementing an incentive program.

The most recent audit experience demonstrates that SCAQMD has the capability to efficiently and effectively participate in future audits under the Prop 1B Program.

## 9. Resolution of the SCAQMD Governing Board

It is anticipated that the SCAQMD Governing Board will consider adoption of the required resolution at its November 6, 2015 meeting. At that time, SCAQMD staff anticipates that the Board will authorize SCAQMD to enter into a local agency grant agreement with ARB, accept funds, and identification of any matching funds under SCAQMD's fiduciary control as identified in our project funding demonstration. SCAQMD's fully executed Board resolution will meet all requirements stipulated in Chapter III, Subsection (E)(9) of the Guidelines. A draft resolution for ARB's review is provided as an attachment (See Attachment 3) to this application. Following SCAQMD's Governing Board approval, a copy of the final resolution will be provided to ARB.

## **10. Copy of SCAQMD's Letter of Intent**

As requested by ARB, attached to this application (See Attachment 4) is a copy of SCAQMD's Letter of Intent stating that SCAQMD wants to compete for Program funds for the Year 5 funding cycle.